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WASTE DISPOSAL, INC., SUPERFUND SITE
Santa Fe Springs, California

STATUS OF ENVIRONMENTAL INVESTIGATIONS
1988-1998
for Parcel
APN 8167-002-024

This Status of Environmental Investigations Report for Parcel 024 includes a summary of parcel ownership and environmental data for the subject land parcel. The report incorporates information from a variety of sources and organizations collected over a 10-year period during the various investigations of the Waste Disposal, Inc. Superfund Site. During development of the report, the U.S. Environmental Protection Agency made extensive efforts to verify the accuracy of the contents. However, there remains a potential for error originating from the numerous information sources themselves, or in the transcription of those sources. Sources not included or referenced in this report may also exist that could modify or update the conclusions contained in this report. The reader is cautioned to review the original source materials stated in the bibliography and additional sources that may be in the public record before drawing any conclusions regarding the absence or extent of contamination and wastes present within an individual site parcel. In addition, not all areas of each parcel were investigated during the referenced studies. The absence of data or investigative activities for areas of parcels should not be interpreted as meaning that any given area of a parcel does not contain buried wastes. Additional investigation may be warranted to confirm the absence or presence of wastes in any specific location within a parcel. Accordingly, this report is not intended to be singly relied on by any person or entity for any purpose. This report is intended to be a general summation and analysis only of the sources included or referenced herein. The U.S. Environmental Protection Agency is not responsible for the ultimate accuracy of this report nor for any reliance thereon. This report is not an order or final agency action.

December 2000

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 9
75 Hawthorne Street
San Francisco, California 94105

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PARCEL SUMMARY:

Assessor's Parcel Number 8167-002-024

Title search was conducted for the period covering
January 15, 1921 to February 5, 1997

BUILDING ADDRESSES:

12637A Los Nietos Road
12637B Los Nietos Road
Santa Fe Springs, CA

CURRENT OWNER:

The Raymond and Donnis Holbrook Trust, since April 30, 1982

A complete chain of title, which is current through February 5, 1997, is included as Attachment 1 of this report.

INTRODUCTION

Parcel 8167-002-024 (Parcel 024) is one of 22 land parcels that collectively comprise the Waste Disposal, Inc. (WDI) Superfund Site (Figure 1). These 22 land parcels were identified by the U.S. Environmental Protection Agency (EPA) in July of 1987 as requiring investigation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) due to the prior use of the properties for waste disposal activities. This determination resulted in the WDI site's being placed on the National Priorities List (NPL) of hazardous waste sites for investigation and cleanup under CERCLA.

The main feature of the approximately 43-acre WDI site is a buried 42-million gallon concrete-lined reservoir in the center of the site that was constructed by 1924 as a covered container for crude petroleum storage. The areas outside of and adjacent to the reservoir began to be used for the unregulated disposal of a variety of liquid and solid wastes and the possible storage and mixing of drilling muds by the late 1920s. Between 1937 and 1941, the reservoir cover was removed. After the removal of the reservoir cover, from the early to mid 1940s onward; the reservoir began to be used for the disposal of wastes.

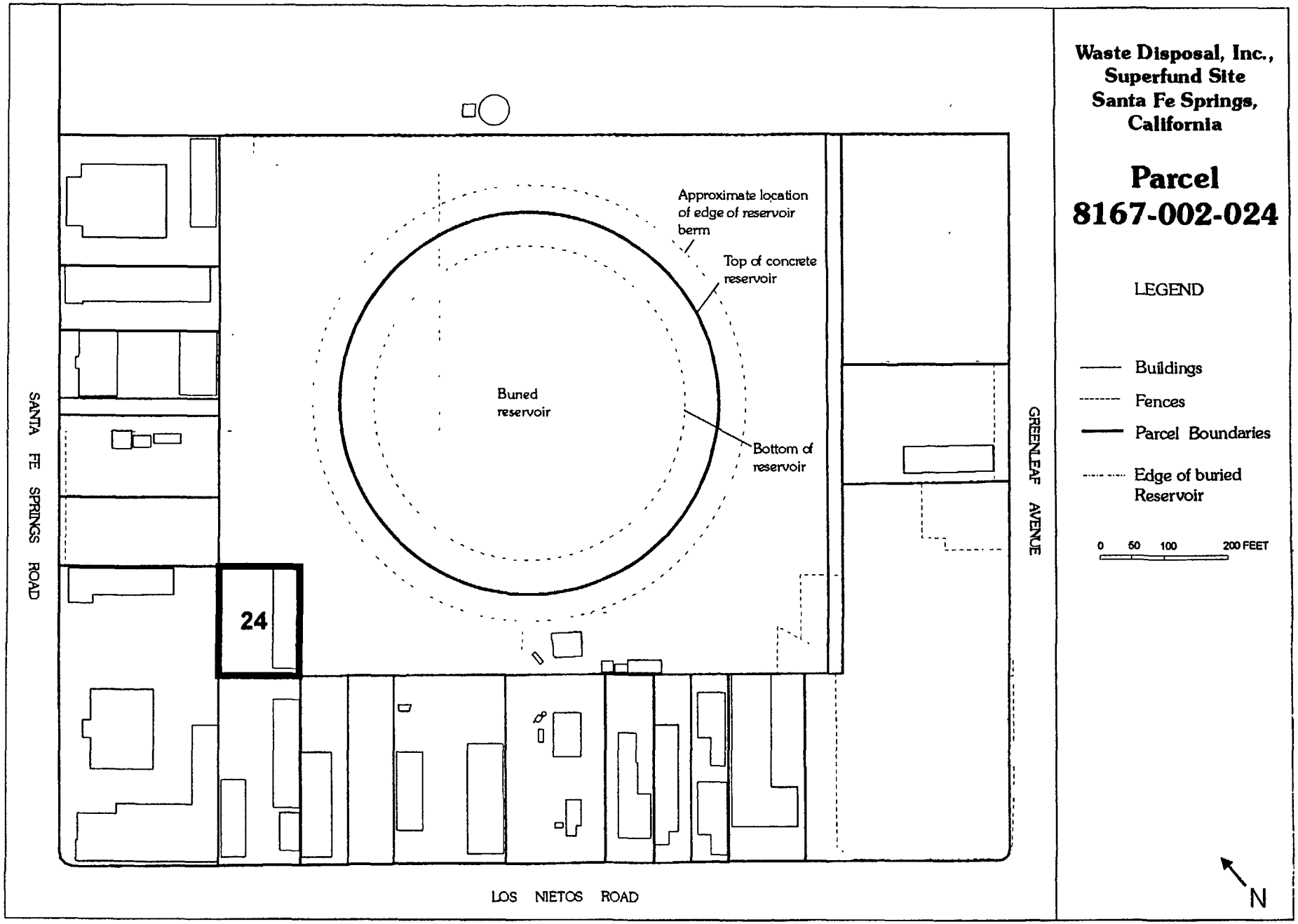
The site operated under a disposal permit beginning in 1949 until at least 1964, and operated perhaps for two to three years afterward. Permitted wastes included rotary drilling muds, clean earth, rock, sand, gravel, paving fragments, concrete, brick, plaster, steel mill slag, dry mud cake from oil field sumps, and acetylene sludge. Investigations have shown that disposed materials also included, but were not limited to, the following unpermitted wastes: organic wastes, oil refinery wastes, solvents, petroleum-related chemicals, and other chemical wastes. Wastes were disposed within the reservoir and on site areas adjacent to the reservoir.

During the 1950s, while disposal activities continued, the reservoir and some of the adjacent and surrounding areas began to be covered with fill material. Some of the perimeter areas of the site outside the reservoir began to be developed for commercial and industrial use. By 1963, the reservoir was covered with fill and by 1964, most, although not all, disposal activities appeared to have ceased. Grading of the fill cover continued until 1966. Currently, more than 20 buildings containing small businesses operate along the perimeter edges of three sides of the site.

In 1988, EPA began the remedial investigation (RI) of the site to determine the extent of buried wastes, and the presence of chemical wastes in soil, soil gas, and groundwater. This work involved drilling soil borings for soil sample collection and the installation of soil vapor and groundwater monitoring wells. EPA used the information collected during the RI to evaluate remedial alternatives in the WDI Feasibility Study Report, issued in 1993. Because the burial of wastes at the site makes it a landfill, EPA identified as the selected remedy in the 1993 Record of Decision (ROD) a remedy typical of landfill closures, consisting of capping of the reservoir area and excavation of wastes from some areas outside of the reservoir for consolidation with the wastes beneath the cap over the reservoir.

As of the present time, EPA has identified certain current owners or operators, former owners or operators who owned or operated the property at the time of waste disposal, former operators of WDI, and generators of wastes disposed of at the site. These parties are considered as potentially responsible parties (PRPs) under

Figure 1: Waste Disposal, Inc., Santa Fe Springs, CA
Site Overview - Location of Parcel 024



CERCLA. Under CERCLA, PRPs can be required to remediate any environmental and human health threats through response actions and to reimburse EPA for its costs in investigating and cleaning up the contaminated site. A group of PRPs known as the Waste Disposal, Inc. Group (WDIG) initiated the remedial design work for this remedy in 1995 under an EPA enforcement order.

The 1993 ROD did not specifically address groundwater. Because uncertainties remained about the extent of groundwater and soil gas contamination, and because further environmental data were necessary for completion of the remedial design, EPA and the WDIG conducted further site investigations. EPA and the WDIG completed the majority of these additional investigations during the summer of 1998, and EPA is compiling data in order to re-evaluate the selected remedial action and to facilitate remedial design.

This Status of Environmental Investigations Report for Parcel 024 presents the findings from the various investigations of the WDI site conducted as of 1998 of concern to this specific parcel. Although data emphasis is placed on what is known for this parcel, selected findings from adjacent parcels are also provided when appropriate. Attachment 1 contains a chronological chain of title for Parcel 024 through February 5, 1997.

OVERVIEW OF ENVIRONMENTAL SAMPLING INVESTIGATIONS

In 1988, EPA conducted the first investigation of the WDI site under CERCLA. This investigation involved the collection of groundwater, soil, and soil gas samples at the site. Within Parcel 024, one soil boring (SB-065) was drilled by EPA that was converted to vapor well VW11. The boring log for SB-065 is provided as Attachment 2. Table 1 presents the analytical results of the EPA soil samples collected from SB-065. The analytical results for these soil samples show the presence of the oil-field-related contaminants

Table 1: Soil Sample Analytical Results for Parcel 024

Organic Compounds									
Sample Location	***ROD Standards**	**SB-065**	**SB-065**	**SB-065**	**SB-065**	**SB-065**	**SB-065**	**SB-065**	**SB-065**
Sample Date		1988	1988	1988	1988	1988	1988	1988	1988
Sample Depth (ft)		5	10	15	20	30	35	40	45
Concentration Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Analytical Parameter									
2-Butanone	NE	42	81	ND	20	ND	ND	ND	ND
4,4'-DDT	5.0	ND	ND	ND	ND	ND	3	ND	ND
Heptachlor	NE	ND	ND	ND	ND	ND	ND	ND	2
Phenanthrene	NE	ND	ND	19	ND	ND	ND	ND	ND
Toluene	NE	9	21	2	ND	2	15	2	3

NE = Not established ND = Not detected ppb = parts per billion

*= Cleanup standards from 1993 Record of Decision

toluene and phenanthrene. Toluene is a common contaminant in wastes, soil, and soil gas throughout the site area. Also reported were 2-butanone, a common solvent used in the welding of plastics, and several chlorinated pesticides. There were no groundwater monitoring wells installed at this parcel. The location of SB-065/VW11 is shown on Figure 2.

1997-98 EPA Soil Gas/Indoor Air Investigations

During the summer of 1997, EPA collected and analyzed soil gas and indoor air samples at the WDI site, including Parcel 024. The purpose of these investigations was to evaluate the potential for migration of soil gas contaminants from the buried waste into the indoor air of the on-site buildings. In order to establish contaminant levels that could be used to determine the need for future site investigations, EPA developed interim threshold levels for chemicals found in soil gas on-site. If a chemical was found to exceed the interim threshold level, EPA determined the need for additional investigations such as indoor air monitoring or expansion of the soil gas monitoring well network. The interim threshold levels are presented in the tables in this report along with the analytical data for Parcel 024.

EPA developed the interim threshold levels based on certain assumptions and property uses at the site. For each chemical, EPA calculated a risk range and selected a concentration level that was within a one in one million (10^{-6}) or one in 100,000 (10^{-5}) cancer risk, depending on the chemical. Exceedance of that concentration does not necessarily indicate an immediate risk. The levels are interim for the purposes of the site investigation, and may or may not be adopted as threshold levels for the final remedy. Compounds detected in indoor air also were compared to background concentrations for chemicals found in the air of the industrial setting of the Santa Fe Springs area.

Soil gas samples were collected from three temporary probes (GP81, GP83, and GP84) shown on Figure 2. The temporary probes were installed by hammering stainless-steel rods to a depth of about 10 ft and then attaching Teflon tubing to an adapter at the bottom of the rods. A portable vacuum pump was used to collect the samples for on-site analysis. Field instruments were also used to detect volatile organic chemicals and methane GP-84 was the only probe in which volatile organic chemicals were detected. The chemicals reported were toluene at a concentration of 54 ppbv and 2-butanone at 210 ppbv. There were no detections of methane or volatile organic chemicals in the other two probes.

Also during the summer of 1997, EPA collected indoor air samples from within the two tenant spaces located at 12637A and 12637B Los Nietos Road. The sampling was performed due to the presence of the buried wastes adjacent to the north and eastern edges of the building. Indoor air samples were collected over a 24-hour sampling period in 6-liter stainless steel canisters for off-site analysis for volatile organic compounds. The space at 12637B is used for as a machine shop; therefore, oil cutting, lubricant, and solvents for degreasing would be expected to be present. Table 2 presents the indoor air results for the two spaces within this building. Carbon tetrachloride at 1 ppbv exceeded its interim threshold level of 0.68 ppbv. There were no other exceedances of the interim indoor air threshold levels for the August samples. The WDIG continued sampling the indoor air of these two spaces starting in February 1998. There were no exceedances

Figure 2: Location of Sampling and Monitoring Points for Parcel 024

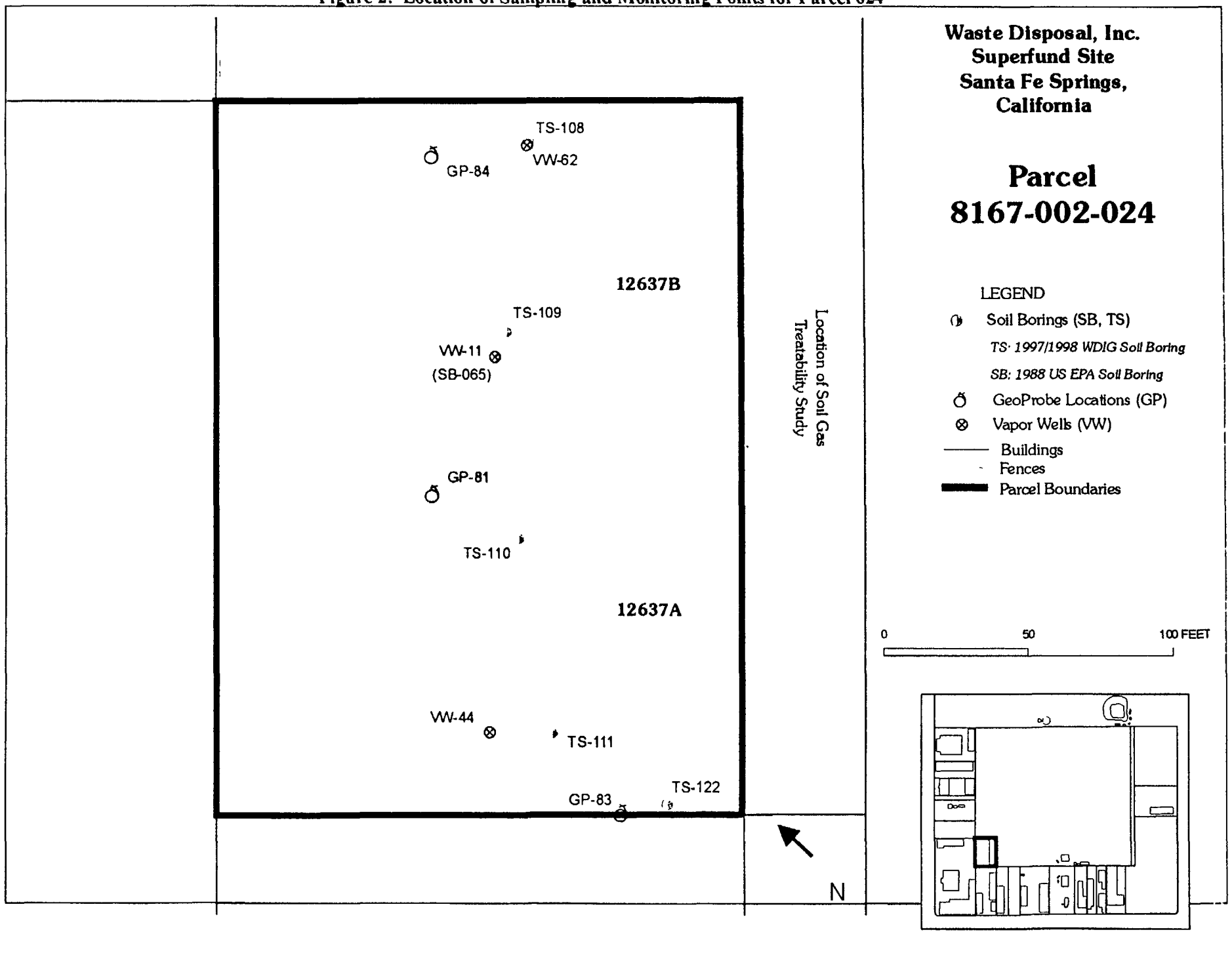


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Table 2: Indoor Air Analytical Results for Parcel 024

Sample Location Bld. Address: Los Nietos Rd.	Interim Threshold Levels	12637 A	12637 A	12637 A	12637 A	12637 B	12637 B	12637 B	12637 B	12637 B	12637 B	12637 B	12637 B	12637 B
Sample Date		Aug-97	Feb-98	Mar-98	Apr-98	Aug-97	Aug-97	Feb-98	Feb-98	Mar-98	Mar-98	Mar-98	Apr-98	Apr-98
Concentration Units	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
Analytical Parameter														
1,1,1-Trichloroethane	368	3	ND	ND	ND	3	0.65	ND	0.6	ND	ND	ND	ND	ND
1,1-Dichloroethane	256	ND	ND	ND	ND	ND	ND	ND	ND	3.6	ND	3.8	ND	ND
2-Butanone	NE	NA	ND	ND	ND	NA	NA	2.9	NA	ND	ND	ND	1.8	ND
Acetone	312	NA	12 0	17 0	7 6	NA	NA	27.0	NA	5.9	6.7	5.6	13.0	3.7
Carbon tetrachloride	0 68	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	NE	0 6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether	NE	NR	4 4	ND	1.9	NR	NR	4.7	NR	ND	ND	ND	1.7	1.8
Methylene chloride	NE	4	1.8	0.95	ND	5	1.10	2.5	1.0	ND	ND	ND	ND	ND
Styrene	NE	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	10 6	ND	0.62	ND	ND	ND	ND	0.66	0.54	ND	ND	ND	2.1	ND
Toluene	212	1	4.7	3.9	2.8	2.0	6.9	9.3	6.7	3.2	3.5	3.2	2.9	2.1
Vinyl Acetate	NE	NA	ND	1 9	ND	NA	NA	ND	NA	2.1	1.0	1.2	ND	ND
Concentration Units	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv
Methane	12,500	ND	3 8	3.3	4.0	ND	ND	2.8	ND	2.5	2.2	2.9	2.6	2.7

ND = Not detected
NE = Not established
NR = Not reported
NA = Not analyzed

ppbv = parts per billion by volume
ppmv = parts per million by volume

of interim indoor air threshold levels for the samples collected through April 1998 (Table 2). On several dates, multiple samples were collected.

Soil Vapor Well Sampling Results

VW11 was first sampled by EPA in 1988. The 1988 analytical results for this well (Table 3) indicated the presence of the solvent tetrachloroethene, a common site soil gas contaminant. VW11 has been sampled four additional times between August 1997 and April 1998. A number of chlorinated solvent chemicals, including tetrachloroethylene and vinyl chloride, and non-chlorinated solvent chemicals such as toluene, were reported for these samples, but their concentrations did not exceed established interim soil gas threshold levels.

During January 1998, the WDIG installed soil gas monitoring well VW44 opposite 12637A Los Nietos and near the southern boundary of this parcel (Figure 2). VW44 was installed with three soil gas probes screened at different depth intervals relative to the depth of wastes disposed of at the site. The shallow probe was placed at between 5 and 7 feet below ground surface (bgs) to monitor soil gas above the waste (present on the east side of the building); the intermediate probe was installed 13 to 16 ft bgs to monitor the depth interval of the buried waste; and the deeper probe was placed between 25 and 30 ft bgs to sample soil vapor below the buried waste interval. During July 1998, EPA installed a third vapor well (VW62) at the northern end of the parcel at 12637B Los Nietos, near the buried waste. VW62 (Figure 2) was also installed with three probes, the first 5 to 10 ft bgs, the second 15 to 18 ft bgs, and the third 25 to 30 ft bgs.

The results of sampling of the three probes for soil vapor wellsVW44 and VW62 are presented in Table 2. A number of chlorinated and non-chlorinated solvent chemicals were also reported for the soil gas samples collected from these probes. Interim soil gas threshold levels were exceeded for vinyl chloride in the samples collected from the deepest probe (25-30 ft bgs) in VW44 during February and April 1998. Elevated concentrations of vinyl chloride have also been detected in soil gas samples collected from the buried wastes on the eastern side of this building, and its presence in VW44 may be a result of migration of vinyl chloride from the buried wastes.

Each of the probes installed in VW62 were sampled once during July 1998. A number of chlorinated solvent chemicals, including tetrachloroethylene and vinyl chloride, and non-chlorinated solvent chemicals such as benzene, were reported for the samples collected from the two deeper probes, but their concentrations did not exceed established interim soil gas threshold levels. No solvent chemical analytes were detected in the sample collected from the shallowest probe.

These vapor wells have also been sampled for the presence of methane. The State of California has established a 1.25% threshold level for methane near buildings or at the boundaries of landfills. Methane is an explosive gas when the concentration exceeds 5%. The methane field instrument measurements and/or soil gas samples analyzed for these wells show that the 1.25% threshold was exceeded in the samples collected from VW11 during August 1997, February 1998 and April 1998, and the 5% explosivity level was exceeded for the sample collected from the shallow probe in VW62 (Table 3).

Table 3: Soil Vapor Well Analytical Results for Parcel 024

Sample Location	Soil Gas Interim Threshold Levels	VW-11	VW-11	VW-11	VW-11	VW-11	VW-44	VW-44	VW-44	VW-44	VW-44	VW-44	VW-62	VW-62	VW-62
Sample Date		Nov-88	Aug-97	Sep-97	Feb-98	Apr-98	Feb-98	Feb-98	Feb-98	Apr-98	Apr-98	Apr-98	Jul-98	Jul-98	Jul-98
Sample Interval (feet)		5-35	5-35	5-35	5-35	5-35	5-7	13-16	25-30	5-7	13-16	25-30	5-10	15-18	25-30
Concentration Units	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
Analytical Parameter															
1,1,1-Trichloroethane	18,400	ND	2.1	ND	ND	ND	250	97	58	51	110	5.5	ND	ND	ND
1,1-Dichloroethane	12,800	ND	ND	ND	2	ND	4	6.7	42	1.8	4	25	ND	0.21	ND
1,1-Dichloroethene	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.49
1,2,4-Trimethylbenzene	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1
1,2-Dichloroethane	180	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	93	ND	ND	ND	ND	ND	ND	1.1	38	ND	ND	19	ND	0.68	ND
1,4-Dichlorobenzene	NE	ND	ND	0.92	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NE	ND	ND	ND	ND	9.2	3.0	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	15,600	ND	ND	ND	ND	ND	100	14	ND	ND	ND	ND	ND	ND	ND
Benzene	100	ND	0.84	1.4	1.5	1.5	ND	1.0	ND	2.3	ND	ND	ND	0.74	0.82
Bromodichloromethane	NE	ND	ND	ND	ND	ND	ND	4.5	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	NE	ND	ND	ND	ND	ND	ND	4.5	ND	9.7	ND	ND	ND	ND	ND
Chlorobenzene	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.5	ND
Chloroform	170	ND	ND	ND	ND	ND	6.4	11	ND	1.8	ND	ND	ND	ND	ND
Chloromethane	37,600	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	930	ND	0.82	ND	2	2.6	ND	ND	ND	ND	ND	ND	ND	0.48	1.6
Ethylbenzene	24,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8
m- & p- Xylene(s)	7,140	ND	ND	ND	ND	1.3	19	1.1	ND	1.8	ND	2.1	ND	ND	3.1
Methyl tert-Butyl Ether	NE	ND	ND	ND	ND	ND	ND	5.2	ND	2	ND	ND	ND	ND	ND
Methylene chloride	NE	ND	ND	0.65	ND	ND	3.8	2	ND	ND	ND	ND	ND	ND	ND
o-Xylene	7,140	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	0.9	ND	ND	2.2

Table 3: Soil Vapor Well Analytical Results for Parcel 024 (continued)

Sample Location	Soil Gas Interim Threshold Levels	VW-11	VW-11	VW-11	VW-11	VW-11	VW-44	VW-44	VW-44	VW-44	VW-44	VW-44	VW-62	VW-62	VW-62
Sample Date		Nov-88	Aug-97	Sep-97	Feb-98	Apr-98	Feb-98	Feb-98	Feb-98	Apr-98	Apr-98	Apr-98	Jul-98	Jul-98	Jul-98
Sample Interval (feet)		5-35	5-35	5-35	5-35	5-35	5-7	13-16	25-30	5-7	13-16	25-30	5-10	15-18	25-30
Concentration Units	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
Analytical Parameter															
Styrene	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	532	5.6	6 6	18	34	16	23	1.7	ND	1.1	ND	ND	ND	0.23	8.5
Toluene	10,600	ND	1.1	1 6	1.3	2.5	ND	3.1	ND	5.7	ND	1.6	ND	2.4	2.9
Trichloroethene	411	ND	ND	1.3	8	3.9	14	ND	ND	ND	ND	ND	ND	0.6	1.7
Trichlorofluoromethane	NE	ND	ND	ND	ND	ND	ND	0.68	ND	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane	NE	ND	ND	ND	ND	ND	ND	0.67	ND	ND	ND	ND	ND	ND	ND
Vinly Acetate	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	12.5	ND	3 6	ND	7.i	5.6	ND	1.2	50	ND	7.2	47	ND	1.4	12
Concentration Units	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Field Methane	1.25	0 8	1.3	0	--	--	--	--	--	--	--	--	1.7	0.5	0.7
Concentration Units	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv
Lab Methane (ppmv)	12,500	--	--	24	18,000	15,000	27	1,600	5,700	880	2,000	8,000	61,000	25,000	31,000

Methane data collected by EPA
NE = Not established
ND = Not detected
NA = not analyzed
ppbv = parts per billion by volume
ppmv = parts per million by volume

WDIG Remedial Design Investigative Activities 1997-98

During the fall of 1997 and spring and summer of 1998, the WDIG conducted a number of studies at the WDI site. These studies included the installation of soil vapor wells (results presented above), the drilling of soil borings for soil/waste characterization, the evaluation of soil vapor removal technology effectiveness, and the evaluation of liquids removal effectiveness.

At Parcel 024, the WDIG drilled five soil borings (TS-108, TS-109, TS-110, TS-111, and TS-122) as part of their efforts to define the extent of the buried waste mass found in the reservoir area (Figure 2). Possible drilling muds were observed in TS-122, and slight contamination was observed in SB-65 in 1998. These and other soil boring observations have been used to estimate the approximate extent of the buried wastes as illustrated on Figure 2. The boring logs are included as Attachment 2 to this report.

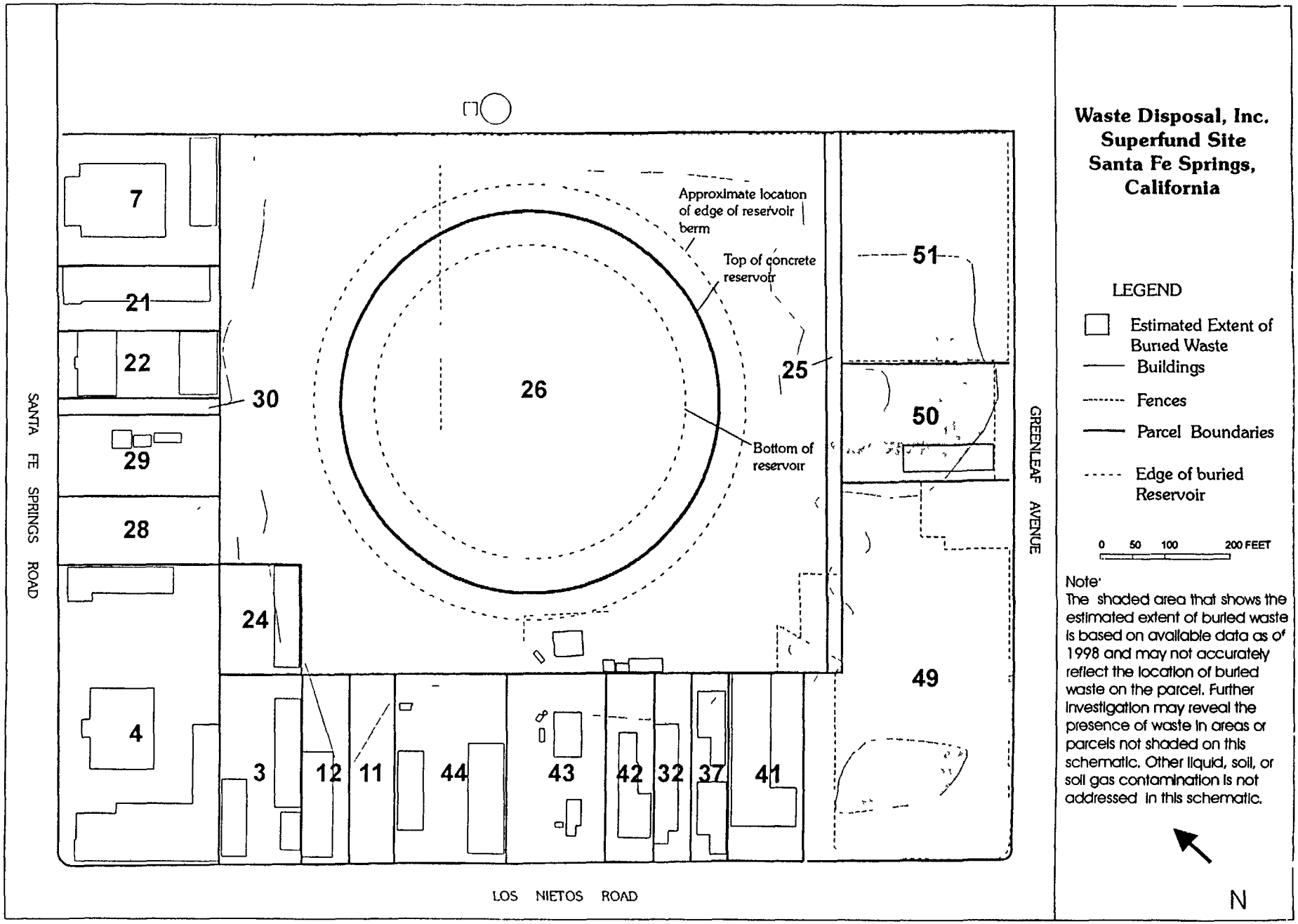
Due to the high concentrations of vinyl chloride observed in soil samples collected from the buried wastes found east of the building, the WDIG performed a soil vapor extraction treatability study for the area immediately east of the building. The initial findings of this study showed soil vapor extraction to be a promising technology for controlling gases generated from the buried wastes.

SUMMARY OF ENVIRONMENTAL SAMPLING RESULTS FOR APN 8167-002-024

Site investigations performed during 1988-89, 1997, and 1998 have evaluated soil, soil gas, and indoor air quality of the building spaces located on Parcel 024. Based on the results from soil borings drilled at Parcel 024 and adjacent parcels, it appears that the buried waste that underlies much of the central portion of the WDI site also underlies Parcel 024. The soil gas results for this parcel indicate that petroleum-related waste and solvent-related chemicals found in the waste throughout the site are also found beneath Parcel 024, indicating the possibility of gas migration beneath this parcel. The limited indoor air data for the parcel indicate that gases being generated by the buried wastes have not significantly impacted the indoor air quality of the building spaces located on this parcel.

Soil borings drilled and wells installed at Parcel 024 and adjacent parcels have been used in estimating the extent of soil and groundwater contamination for the site overall. The approximate extent of the buried waste that surrounds the reservoir area as shown on Figure 3 is based on the results of the 1988 investigation and the 1997-1998 site investigations.

Figure 3: Waste Disposal, Inc., Santa Fe Springs, CA
Estimated Extent of Buried Waste



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TRC, 1998b. Preliminary Site Characterization Report, Waste Disposal, Inc. Superfund Site. March 1998.

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TRC, 1998e. Technical Memorandum No. 10 - Additional Soil Sampling for Leachability Testing, Report of Findings. Waste Disposal, Inc. Superfund Site. October 1998.

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TRC, 1999b. 1998 Annual In-Business Air Monitoring Report, Waste Disposal, Inc. Superfund Site. March, 1999.

TRC, 1999c. 1998 Annual Ground Water Monitoring Report, Waste Disposal, Inc. Superfund Site. March, 1999.

TRC, 1999d. Technical Memorandum No. 9A - Soil Vapor Extraction Testing, Report of Findings, Waste Disposal, Inc. Superfund Site. March 1999.

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USEPA, 1993b. Feasibility Study Report for Soils and Subsurface Gas, Waste Disposal, Inc. Superfund Site, Santa Fe Springs, California. August 2, 1993.

USEPA, 1993c. Record of Decision - Soil and Subsurface Gas Operable Unit, Waste Disposal, Inc. Superfund Site, Santa Fe Springs, California. December 22, 1993.

USEPA, 1993e. Administrative Order for Remedial Design - Docket No. 94-17, Waste Disposal, Inc. Superfund Site, Santa Fe Springs, California. December 27, 1993.

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USEPA, Environmental Response Team Center, 1999a. Reservoir Characterization Report, Volume I (Physical Characterization) and Volume II (Chemical Characterization), Waste Disposal, Inc. Site, Santa Fe Springs, California. January 15, 1999.

ATTACHMENTS

ATTACHMENT 1
CHAIN OF TITLE
THROUGH February 5, 1997
WASTE DISPOSAL, INC. APN 8167-002-024

No. 1
01-15-21
Book 134 Page 213 of Official Records
James Weaver, et al.
Brenton S. Carr
Granted oil leasehold

No. 2
06-15-21
Book 332 Page 140 of Official Records
Brenton S. Carr / Huntington Owners Oil Co.
James Weaver, et al.
Surrendered oil leasehold

No. 3
11-26-21
Book 587 Page 368 of Official Records
Pacific Land Improvement Co.
Chanslor-Canfield Midway Oil Co.
Grant deed

No. 4
01-22-32
Book 11335 Page 264 of Official Records
Chanslor-Canfield Midway Oil Co.
General Petroleum Corp. of CA
Grant deed to real property, oil rights reserved by seller

No. 5
03-01-40
Book 17327 Page 128 of Official Records
General Petroleum Corp. of CA
Public record
Notice of non-responsibility

No. 6
02-02-42
Book 19044 Page 385 of Official Records
General Petroleum Corp. of CA
Ford Alexander Corp.
Deed to real property, oil rights reserved by Chanslor-Canfield

No. 7
02-26-46
Book 22789 Page 395 of Official Records
Ford Alexander Corp.
Public record
Notice of completion of work

No. 8
10-21-47
Book 25500 Page 167 of Official Records
Ford Alexander Corp.
N. B. Hudson
Grant deed to real property, oil rights reserved by Chanslor-Canfield

No. 9
10-21-47
Book 25500 Page 169 of Official Records
N.B. Hudson
F. Caneer, D. L. Carter, Marvin Pitts
Grant deed, undivided 1/4 interest each

No. 10
10-05-51
Book 37358 Page 244 of Official Records
Chanslor-Canfield Midway Oil Co.
Atlantic Oil Co.
Leased oil & gas rights

No. 11
10-05-51
Book 37361 Page 362 of Official Records
Chanslor-Canfield Midway Oil Co.
Public record
Notice of non-responsibility

No. 12
06-15-53
Book 41974 Page 191 of Official Records
Morton and Dolley, a partnership: Harold C. Morton, Dorothy F. Morton, Chester F. Dolley
California Bank, beneficiary; California Trust Co., trustee
Deed of trust

No. 13
04-05-55
Book 47409 Page 100 of Official Records
N. B. Hudson
N. B. Hudson and Bessie Hudson
Grant deed, joint tenancy, 1/4 undivided interest

No. 14
09-14-56 (Doc. date)
Book 52331 Page 1 of Official Records
Morton and Dolley, a partnership: Harold C. Morton, Dorothy F. Morton, Chester F. Dolley
California Bank, beneficiary and trustee
Deed of trust

No. 15
04-05-60
Instrument No. 1677
N. B. Hudson, Bessie Hudson
D. L. Carter, Zelda Carter
Grant deed

No. 16
04-05-60
Instrument No. 1678
D. L. Carter, Zelda Carter
N. B. Hudson, Bessie Hudson, beneficiaries; Security First National Bank, trustee
Deed of trust

No. 17
07-15-60
Instrument No. 4314
Security First National Bank, trustee
Persons entitled
Reconveyance
Affects Doc. No. 16

No. 18
10-13-60
Instrument No. 4813
D. L. Carter, Zelda Carter
Marvin Pitts, Cecilia Pitts
Grant deed to 1/12th interest

No. 19
10-13-60
Instrument No. 4814
D. L. Carter, Zelda Carter
F. Caneer, Wanda Caneer
Grant deed to 1/12th interest

No. 20
08-07-61
Instrument No. 225
F. Caneer, Wanda Caneer, Marvin Pitts, Cecilia Pitts, D. L. Carter, Zelda Carter
Raymond R. Holbrook, Donnis Holbrook, as to an undivided ½ interest; Leslie M. Holbrook, Fern Holbrook, as to an undivided ½ interest
Grant deed

No. 21
11-08-63
Instrument No. 4882
Morton and Dolley, a partnership: Harold C. Morton, Dorothy F. Morton, Chester F. Dolley, Anna M. Dolley
United California Bank, beneficiary and trustee
Deed of trust

No. 22
02-16-65
Instrument No. 5962
United California Bank, trustee
Persons entitled
Full reconveyance
Affects Doc. No. 12

No. 23
02-16-65
Instrument No. 5963
United California Bank, trustee
Persons entitled
Full reconveyance
Affects Doc. No. 14

No. 24
05-23-66
Instrument No. 2391
This document, included by CH2M Hill (as Document 23 in their report), does not affect this parcel. Upon close examination, the legal description of the property does not include any portion of APN 24. Excluding this document from the title tree, as we have done, does not create a gap in the chain of title for this parcel.

No. 25
05-23-69
Instrument No. 2917
Mobil Oil Co.
Public record
Unit agreement

No. 26
05-23-69
Instrument No. 2918
Mobil Oil Co.
Public record
Exhibits to unit agreement

No. 27
08-25-69
Instrument No. 2535
United California Bank
Security Pacific National Bank
Assignment and substitution of trustee

No. 28
12-28-70
Instrument No. 1146
Mobil Oil Co.
Public record
Certificate that Unit Agreement will become effective

No. 29
01-26-71
Instrument No. 1631
Mobil Oil Co.
Public record
Counterpart C of Unit Agreement

No. 30
02-18-71
Instrument No. 3068
Chanslor-Western Oil & Develop Co.
Agreement to become a party to unit agreement

No. 31
08-17-71
Instrument No. 3195
Bell Petroleum Co., Roland A. Way, Ethel Eckels
Agreement to become a party to unit agreement

No. 32
08-21-72
Instrument No. 3990
Rodman Palmer
Agreement to become a party to unit agreement

No. 33
12-20-73
Instrument No. 3425
Catherine Yrisarri
Agreement to become a party to unit agreement

No. 34
03-04-74
Instrument No. 2550
Estate of Leslie Holbrook
Fern Holbrook
Decree of distribution

No. 35
03-22-74
Instrument No. 3808
Mobil Oil Co.
First revision of exhibit B of unit agreement

No. 36
04-05-74
Instrument No. 67
Fern Holbrook
Raymond Holbrook, Donnis Holbrook
Grant deed

No. 37
04-15-74
Instrument No. 2865
Mobil Oil Co.
Second revision of exhibit B of unit agreement

No. 38
08-31-77
Instrument No. 77-965116
Raymond R. Holbrook, Donnis H. Holbrook
City of Santa Fe Springs
Covenant and Affidavit Regarding Installation of Sewage Facilities

No. 39
01-10-78
Instrument No. 78-30274
Raymond Holbrook, Donnis Holbrook
Jack Perrin, beneficiary Title Insurance and Trust Co., trustee
Deed of trust

No. 40
02-06-78
Instrument No. 7
Raymond R. Holbrook, Donnis H. Holbrook
Southern California Edison Co.
Easement

No. 41
04-30-82
Instrument No. 82-450139
Raymond Holbrook, Donnis Holbrook
Raymond Holbrook, Donnis Holbrook Trust
Grant deed

No. 42
05-03-83
Instrument No. 83-493854
Marvin W. Pitts, Cecilia Pitts
Pitts family trust
Quitclaim deed

No. 43
05-07-84
Instrument No. 84-540205
Ticor Title Co., formerly Title Insurance and Trust Co., trustee
Persons entitled
Full reconveyance
Affects Doc. No. 37

No. 44
07-19-91
Instrument No. 91-1112254
Atlantic Oil Co.
Chanslor-Canfield Midway Oil Co.
Quitclaim of oil and gas lease

ATTACHMENT 2

Soil Boring Logs

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME:	WASTE DISPOSAL INC.	BORING NUMBER:	SB-065	DATE/TIME STARTED:	10/07/88 1150
LOCATION:	SANTA FE SPRINGS CALIFORNIA	BORING LOCATION:	C&E DIE & FAB	DATE/TIME COMPLETED:	10/07/88 1355
		DRILLING CONTRACTOR:	DATUM	TOTAL DEPTH:	45.00
CLIENT NAME:	EPA	DRILLING METHOD:	HSA	SURFACE ELEVATION:	157.9569
SITE MANAGER:	D. MELCHIOR	BIT SZ/HAMMER WT/DROP:	7"/140#/30"	WATER DEPTH:	0.00
LOGGED BY:	K. TILFORD	SAMPLE RETRIEVAL SYS:	SPLIT SPOON		

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PERM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0						0.0	FIRST SAMPLE COLLECTED AT 5 FEET. 1150
5	FINE SAND, SILT	01 02 03 04	3 4 5	12.0	0	N	DB	SM	L	SM	0.0	NO VISIBLE CONTAMINATION. DARK BROWN SILTY SAND, SLIGHTLY MOIST, MEDIUM DENSE TO LOOSE. CLP SAMPLE. DUPLICATE ORGANIC TAKEN. 1155
10	FINE SAND, SILT	05 06 07 08	4 4 8	1.0	0	N	DB	SM	L	ML	1.0	NO VISIBLE CONTAMINATION. DARK BROWN SILT WITH SAND. MEDIUM DENSE TO LOOSE, SLIGHTLY MOIST. CLP SAMPLE. DUPLICATE ORGANIC SAMPLE. 1200
15	CRS SAND, MED SAND, FINE SAND, SILT	09 10 11	18 46 60	1.5	0	N	B	SM	L-M	CL-SM	0.0	BROWN SILTY CLAY TO COARSE SAND AT BOTTOM OF SAMPLER, VERY DENSE, STIFF, SLIGHTLY MOIST. SLIGHT CONTAMINATION VISIBLE. NON CLP SAMPLE. 1225
20	CRS SAND, MED SAND	12 13 14	27 28 29	20.0	10	N	LB	SM	M-M	SM	1.5	LIGHT BROWN COARSE SAND, DENSE, SLIGHTLY MOIST, WEAKLY CEMENTED. NO CONTAMINATION VISIBLE. NO DUPLICATE RECOVERED. CLP SAMPLE. 1230
25	COBBLES		33 56 0	0.0	20	N	LB	SM	H	GP	0.4	LIGHT BROWN COARSE GRAVELLY SANDS,LOOSE, SLIGHTLY MOIST. NO VISIBLE CONTAMINATION. NO SAMPLE RETAINED. 1245
30	COBBLES	15 16 17	38 50 0	1000.0	11	N	LB	SM	H	GP	0.0	LIGHT BROWN COARSE GRAVELLY SAND, DENSE, SLIGHTLY MOIST. SLIGHT CONTAMINATION VISIBLE. NON CLP SAMPLE. 1300
35	MED SAND	18 19 20	100 0 0	1000.0	10	N	LB	SM	M-H	SP	0.0	FINE TO MEDIUM SAND, POORLY GRADED, DENSE,SLIGHTLY MOIST. NO VISIBLE CONTAMINATION. NON CLP SAMPLE. 1330
40	MED SAND, FINE SAND, SILT	21 22 23	18 55 0	1000.0	10	N	LB	SM-ML	M-L	SM	0.0	LIGHT BROWN, MEDIUM SAND TO SILT, DENSE, SLIGHTLY MOIST. NO VISIBLE CONTAMINATION. NON CLP SAMPLE. 1355
45	CRS SAND, MED SAND	24 25 26	38 59 0	1000.0	5	N	LB	SM	M	SM	0.0	COARSE TO MEDIUM SAND, DENSE, SLIGHTLY MOIST.NO VISIBLE CONTAMINATION. NON CLP SAMPLE. BOTTOM OF BORING 45'. VADOSE MONITORING WELL INSTALLED. SEE WELL CONSTRUCTION SHEET FOR DETAILS.

BORING NO.

~~MONITORING WELL~~ WDI-TS-108 SHEET 1 OF 1

DRILLING CO./RIG TEG
SAMPLER TYPE AND DIMENSION Cont. Core 1" x 2'
FIELD ENGINEER/ GEOLOGIST A. Isely
EDITED BY A. Isely
CHECKED BY

COORDINATES N NM E NM
DATE BEGAN 11-7-97
DATE FINISHED 11-7-97
GROUND SURFACE EL. NM

DEPTH IN FEET	PID or FID (ppm)	~~PENETRATION RESISTANCE (BLOWS PER FOOT)~~ ATTEMPT	SAMPLE TYPE (REC.)	U.S.C.S.	PROFILE/ LITHOLOGY	WELL CONSTRUCTION DETAIL
0	NA	1100	CC 1.8'	ml/sm		
		1105	1.4'			
5		1110	1.1"			
		1115	1.2'	cl/ml		
		1120	1.5'			
10		1125	2'			
		1130	1.4'	cl		
15		1135	2'			
20						
25						
30						
35						
40						

→ 4"-6" Asphalt

DESCRIPTION

(4"-2') Silty Sand to Sandy Silt, Light brown to Dark brown, trace of coarse Sand and gravel, well graded, micaceous dry, No odor, No staining
(2.8'-4') similar material as 4'-2' core. Brown, decrease in coarse materials, dry, No odor, No staining.
(5.1'-6') Silty Clay to Clayey Silt, Brown trace of sand (fine grained), Micaceous, slightly moist, No odor, No Staining
(6'10"-8') Similar material as 5.1'-6' Core. No odor, No staining.
(8.7'-10') similar material as 6'10"-8 core. No odor, No staining
(10'-12') Clay, Brown, trace of sand, micaceous, moist, soft, No odor, No staining.
(12.8'-14') similar material as 10'-12' Core. Increase in silt & Sand content, slightly moist, stiff, No odor, No staining.
(14'-16') Similar material as 12.8'-14' Core. Very stiff (difficult drilling) No odor, No staining.

Did Not encounter sump material

TOTAL DEPTH: 16 FEET
Did not encounter Liquids
Backfilled with Bentonite pellets & asphalt patch.
NA - Not Applicable
NM - Not Measured
CC - Continuous Core

A-Field/Blank MW Log REV. 04/06/92

~~PROJECT NAME~~ CLIENT WOCSL

PROJECT NO. 94-256

LOCATION Santa Fe Springs, CA
WDI

ENVIRONMENTAL SOLUTIONS, INC.

BORING No.

~~MONITORING WELL~~ WDI-TS-109 SHEET 1 OF 1

DRILLING CO./RIG TEG
SAMPLER TYPE Cont. Core
AND DIMENSION 1" x 2'
FIELD ENGINEER/ GEOLOGIST A. Isaly
EDITED BY A. Isaly
CHECKED BY

COORDINATES N NM E NM
DATE BEGAN 11-7-97
DATE FINISHED 11-7-97
GROUND SURFACE EL. NM

DEPTH IN FEET	PID or FID (ppm)	~~PENETRATION RESISTANCE~~ ATTEMPT (BLOWS PER FOOT)	SAMPLE TYPE (REC.)	U.S.C.S.	PROFILE/ LITHOLOGY	WELL CONSTRUCTION DETAIL	DESCRIPTION
0							→ 4"-6" Asphalt
	NA	1135	CC 1.4'				(8"-2') Silty Sand to Sandy Silt, Brown, trace of coarse sand, micaceous, slightly moist, No odor, No staining.
		1140	1'	ml/sm			(3'-4') similar material as 8"-2' core. No odor, No staining.
5		1145	1'				(5'-6') similar material as 3'-4' core No odor, No staining.
		1150	1.5'				(6.7'-8') similar material as 5'-6' core. Dark brown, increase in silt content, No odor, No staining.
		1155	1.2'	cl/ml			(8.10"-10') Silty Clay to Clayey Silt, Dark brown, trace of fine grained sand, micaceous, moist, No odor, No staining.
10		1200	1.6'				(10.6'-12') Clay, Dark brown, trace of sand, micaceous, moist, soft No odor, No staining.
		1205	1.5'	cl			(12.7'-14') Similar material as 10.6'-12' core slightly moist, No odor, No staining.
15		1210	2'	cl/sc			(14-15.9') similar material as 12.7'-14' core. No odor. No staining (15.9'-16') Sandy Clay to Clayey Sand. Red Brown, Red grained sand, slightly moist, No odor No staining.
20							
25							Did not encounter Sump material
30							TOTAL DEPTH: 16 FEET
35							Did not encounter liquids
40							Backfilled with Bentonite pellets & Asphalt patch

NA - Not Applicable
NM - Not Measured
CC - Continuous Core

A-Field/Blank MW Log REV. 04/06/92

CLIENT ~~PROJECT NAME~~ Wocal

PROJECT NO. 94-256

LOCATION Santa Fe Springs, CA
WDI

ENVIRONMENTAL SOLUTIONS, INC.

BORING NO.

~~MONITORING WELL~~ WDI-TS-110 SHEET 1 OF 1

DRILLING CO./RIG TEG
SAMPLER TYPE Cont. Core
AND DIMENSION 1" x 2'
FIELD ENGINEER/ GEOLOGIST A. Isaly
EDITED BY A. Isaly
CHECKED BY

COORDINATES N NM E NM
DATE BEGAN 11-7-97
DATE FINISHED 11-7-97
GROUND SURFACE EL. NM

DEPTH IN FEET	PID or FID (ppm)	~~PENETRATION RESISTANCE (BLOWS PER FOOT)~~ TIME	SAMPLE TYPE (REC.)	U.S.C.S.	PROFILE/ LITHOLOGY	WELL CONSTRUCTION DETAIL	DESCRIPTION
0							4"-6" Asphalt
	NA	1400	CC 1.4'	ml/sm			(8"-2') Silty Sand to Sandy Silt, light brown to dark brown, trace of coarse sand and gravel, micaceous, dry, No odor, No staining.
		1405	1.6'				(2.6'-4') Silty Clay to Clayey Silt, Brown, trace of fine grained sand, micaceous, slightly moist, No odor, No staining
5		1410	1.1'				(4.11'-6') Similar material as 2.6'-4' core. Increased clay content, No odor, No staining.
		1415	1.2'	cl/ml			(6.10"-8') Similar material as 4.11"-6' core. No odor, No staining.
		1420	1'				(9'-10') Similar material as 6.10"-8' core. No odor No staining.
10		1425	1'				(11'-12') Clay, brown, trace of fine grained sand, Stiff, moist, No odor, No staining.
		1430	1.5'	cl			(12.7'-14') Similar material as 11'-12' core. Dark brown, Stiff, dry, No odor, No staining
15		1435	2'				(14'-16') Similar material as 12.7'-14' core. No odor, No staining.
20							
25							
30							Did not encounter sump material
35							TOTAL DEPTH: 16 FEET
40							Did not encounter liquid
							Backfilled with bentonite pellets & Asphalt patch.

NA - Not Applicable
NM - Not Measured
CC - Continuous Core

A-Field/Blank MW Log REV. 04/06/92

CLIENT ~~PROJECT NAME~~ UNOCAL

PROJECT NO. 94-256

LOCATION Santa Fe Springs, CA
WDI

ENVIRONMENTAL SOLUTIONS, INC.

Boring No.

~~MONITORING WELL~~ WDI-TS-111 SHEET 1 OF 1

DRILLING CO./RIG TEG
SAMPLER TYPE Cont. Core
AND DIMENSION 1" x 2'
FIELD ENGINEER/ GEOLOGIST A. Isaly
EDITED BY A. Isaly
CHECKED BY

COORDINATES N NM E NM
DATE BEGAN 11-7-97
DATE FINISHED 11-7-97
GROUND SURFACE EL. NM

DEPTH IN FEET	PID or FID (ppm)	~~PENETRATION RESISTANCE (BLOWS PER FOOT)~~ Time	SAMPLE TYPE (REC.)	U.S.C.S.	PROFILE/ LITHOLOGY	WELL CONSTRUCTION DETAIL	DESCRIPTION
0							4"-6" Asphalt
	NA	1430	CC 1'	ml/sm			(1'-2') Silty Sand to Sandy Silt, light brown to dark brown, trace of coarse sand and gravel, micaceous, dry, No odor, No staining
		1435	1.3'				(2.9'-3.5') similar material as 1'-2' core. Red brick fragments, No odor, No staining. (3.8'-4') Silty
5		1440	1.4'	cl/ml			Clay to Clayey Silt, Brown, trace of sand, micaceous,
		1445	1.3'				No odor, No staining
		1450	1.1'	cl/sc			(4.8'-6') similar material as 3.8'-4' core. No odor
10		1455	1.7'				No staining.
		1500	1.6'	cl			(6.9'-8') similar material as 4.8'-6' core.
		1505	2'				Increase in clay content, No odor, No staining
15							(9.11'-10') Sandy Clay to Clayey Sand, Brown, fine to med. grained sand, slightly moist, No odor,
							No staining.
20							(10.5'-12') Clay, dark brown, trace of fine grained
							Sand, micaceous, slightly moist, soft, No odor,
							No staining.
25							(12.6'-14') similar material as 10.5'-12' core. slightly
							moist stiff, No odor, No staining.
							(14'-16') similar material as 12.6'-14' core. Red
30							brown, very stiff, dry No odor, No staining.
							Did Not encounter sump material
35							TOTAL DEPTH: 16 FEET
							Did not encounter liquids
40							Backfilled with bentonite pellets. & Asphalt patch

NA - Not Applicable
NM - Not Measured
CC - Continuous Core

A-Field/Blank MW Log REV. 04/06/92

~~PROJECT NAME~~ Client Unocal

PROJECT NO. 94-256

LOCATION Santa Fe Springs, CA
WDI

ENVIRONMENTAL SOLUTIONS, INC.

BORING NO.

~~MONITORING WELL~~ WDI-TS-/22 SHEET 1 OF 1

DRILLING CO./RIG TEG
SAMPLER TYPE Cont. Core
AND DIMENSION 1" x 2'
FIELD ENGINEER/ GEOLOGIST A. Isaly
EDITED BY A. Isaly
CHECKED BY

COORDINATES N NM E NM
DATE BEGAN 11-11-97
DATE FINISHED 11-11-97
GROUND SURFACE EL. NM

DEPTH IN FEET	PID or FID (ppm)	~~PENETRATION RESISTANCE~~ +BLOWS PER FOOT (TIME)	SAMPLE TYPE (REC.)	U.S.C.S.	PROFILE/ LITHOLOGY	WELL CONSTRUCTION DETAIL
0	NA	1020	CC 1.2'	ml/sm		
		1025	1.3'	cl/ml		
5		1030	1.4'	sp		
		1035	1.7'	cl/sc		
		1040	2'	sp		
10		1045	2'			
		1050	2'	cl		
		1055	2'			
15		1100	1.9'	cl/sc		
20						
25						
30						
35						
40						

→ 4"-6" ASPHALT DESCRIPTION

(10"-2') Silty Sand to Sandy Silt, Brown, trace of Coarse Sand and Gravel, Slightly Moist, No odor, No staining.
(2.9'-3.5') Silty Clay to Clayey Silt, Brown, trace of Sand, Micaceous, Slightly Moist, No odor, No staining
(3.5-4') Sand, Light Brown, fine grained, trace of Silt, poorly Micaceous, Slightly moist No odor, No staining. grade
(4.0'-5') Similar material as 3.5'-4' core No odor, No staining (5-6') Sandy Clay to Clayey Sand, Brown, Micaceous, Slightly moist. No odor, No staining.
(6.5-8') Similar material as 5'-6' core No odor No staining
(8-8.4') Sand, Light brown, fine grained, poorly graded Slightly Moist, No odor, No staining (8.4'-10') Clay, Olive green, trace of sand, Micaceous, Moist, soft, No odor, No staining.
(10'-12') Similar material as 8.4'-10' core. No odor, No staining
(12-14') Similar material as 10'-12' core. No odor, No staining.
(14'-16') Similar material as 12'-14' core. No odor No staining.
(16.3'-18') Sandy Clay to Clayey Sand, Red Brown, Micaceous, Moist, No odor, No staining.

Encounter Olive green clay from ~8.4' to 16'. Possibly drilling mud, No odor, No staining
TOTAL DEPTH: 18 FEET
Did not encounter liquids.
Backfilled with Bentonite Pellets & Asphalt patch.

NA - Not Applicable
NM - Not Measured
CC - Continuous Core

A-Field/Blank MW Log REV. 04/06/92

~~PROJECT NAME~~ CLIENT UNOCAL
PROJECT NO. 94-256
LOCATION Santa Fe Springs, CA
WDI

ENVIRONMENTAL SOLUTIONS, INC.

MONITORING WELL VW-44

SHEET 1 OF 1

DRILLING CO./RIG West Hazmat
SAMPLER TYPE Continuous Core
AND DIMENSION 5' x 2.5"
FIELD ENGINEER/ GEOLOGIST A. Isaly
EDITED BY A. Isaly
CHECKED BY

COORDINATES N NM E NM
DATE BEGAN 1/15/98
DATE FINISHED 1/15/98
GROUND SURFACE EL. NM

DEPTH IN FEET	PID or FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE TYPE	U.S.C.S.	PROFILE/ LITHOLOGY	WELL CONSTRUCTION DETAIL	DESCRIPTION
0	NM	NA	3 (0-3)	ml/cl/ml			(4") Asphalt surface (0-1.5') Silty Sand to Sandy Silt, Dark brown, trace of coarse sand and gravel, broken rock fragments, micaceous, slightly moist, No odor, No Staining (1.5-5') Silty Clay to Clayey Silt, Dark brown to black, trace of coarse sand and gravel, micaceous, med. plasticity, slightly moist, slight odor, Possibly Stained (3-5) No Recovery
5			5 (5-10)	cl/sc			(5-10') Sandy Clay to Clayey Sand, Red brown, fine grained sand, mottling, micaceous, (8-9') increase in Sand Content
10			5 (10-15)	cl			(10'-18') Clay, Red brown, trace of sand and gravel, high plasticity, micaceous, mottling, slightly moist, No odor, No Staining
15			5 (15-20)	cl/ml			(18'-20') Silty Clay to Clayey Silt, Red brown, trace of fine grained sand, micaceous, mottling, low to med plasticity, slightly moist (19-20') increase in Sand Content
20			4 (20-24)	SP			(20'-30') Sand, Red brown to brown, fine grained sand, poorly graded, micaceous, mottling, slightly moist, No odor, No Staining (23'-26') fine to med. Grained sand, No odor, No Staining (24-25) No recovery (26-30') increase in coarseness, trace of gravel, well graded, slightly moist, No odor, No Staining (27.5-30) No recovery
25			2.5 (25-27.5)	SW			
30							Total Depth (Cont. Core): 30 FEET Did not encounter liquids during drilling. Possibly impacted soil from 1.5' to 3' 1st Probe: T.D. 30 (25-30) Gravel (30-24) Chips (hyd) (24-22.5) Grout (22.5-17.5) Chips (hyd.) (17.5-8.5) 2nd Probe: T.D 16' (13-16) Gravel (16.5-12') Chips (hyd.) (12'-10.7') Grout (10.7-8') Chips (hyd.) (8'-7.5') 3rd Probe: T.D. 7 (5-7) Gravel (7.5-4) Chips (hyd.) (4'-3') Portland cement (3'-0")

Screens @ 16' & 7'

A-Field/Blank MW Log REV. 04/06/92

PROJECT NAME WD1
PROJECT NO. 94-256
LOCATION Santa Fe Springs, CA

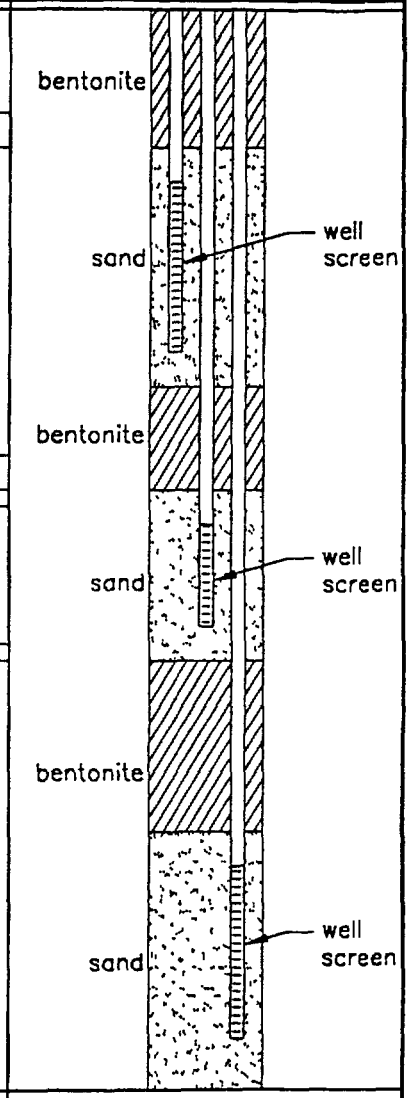
ENVIRONMENTAL SOLUTIONS, INC.

24-23
23-16
10.7
7
7.5 Gr
8.5 chips

BORING LOG	BORING/WELL NO.: VW-62	Page 1 of 1
Installation: Waste Disposal Inc.		Site: C & E Die & Fab.
Project No.: 6118	Client/Project: USACE	
Contractor: CDM Federal	Drlg Contractor: Spectrum Exploration, Inc.	Driller: D. Boston
Drlg Started: 7/8/98	Drlg Ended: 7/8/98	Borehole dia(s): 8 in.
Drlg Method/Rig Type: HSA CME 75		Elevation (ft): -
Logged by: P. Severson	E-Log (Y/(N)) From - to -	Protection Level: D

Depth (ft)	Sample	Rec. (ft)	Lithologic Description	USCS
0	C	4	ASPHALT top 2 inches, Sandy Silt, red with aggregate to 4 ft. SANDY CLAY, brown, hard, cohesive, dense, bottom 2 inches is softer.	FILL
				CL
5		4	SILTY CLAY, dark brown, damp, very cohesive, soft.	
			8 ft. changes to very soft, moist.	CL/ ML
10		3	Top 2 ft. SILTY CLAY, very soft, wet, very cohesive. bottom 1 ft. SANDY SILT, red brown, dry, hard, crumbly.	
				ML
15		5	14–14.5 ft. SILTY CLAY, slightly soft, mottled brown with black.	CL/ML
			14.5–18.5 ft. SANDY SILT, hard, dry, crumbly sand to medium grained in size.	ML
			18.5–19 ft. SILTY SAND, red brown as above, softer, very cohesive.	SM
20		2.5	SAND, very well sorted, top 1.5 ft., fine to medium grained, dark greenish tan. Bottom foot is coarser grained and lighter in color, damp, cohesive.	SP
25		2	SAND, fine to coarse grained, moderately well sorted, ~5% gravel to 3/8", loose, slightly damp.	
		2	SAND, as above.	
30		2	SAND, fine to medium grained, very well sorted, damp, slightly cohesive.	
35				

Well Construction Diagram



C = Thin wall tube R = Rock coring _____ Field G/C (Make/Mod.) _____

S = Split spoon (tube) O = Other _____ G/C Oper.: _____

C = Cuttings Notes No wastes encountered in borehole.

D:\CADD\6118\004\DM1\GWM\LOGVW62.DWG 8/19/98

ATTACHMENT 3

Glossary of Terms

Glossary of Terms and Acronyms for Superfund

Cleanup: Actions taken to deal with a release or threatened release of hazardous substances that could affect public health or the environment. The term "cleanup" is often used broadly to describe various response actions or phases of remedial responses such as the Remedial Investigation/Feasibility Study (RI/FS).

Community Relations: EPA's program to inform and involve the public in the Superfund process and respond to community concerns.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A Federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). The Acts created a special tax that goes into a Trust Fund, commonly known as Superfund, to investigate and clean up abandoned or uncontrolled hazardous waste sites. Under the program, EPA can either;

- Pay for site cleanup when parties responsible for the contamination cannot be located or are unwilling or unable to perform the work, or
- Take legal action to force parties responsible for site contamination to clean up the site or pay back the Federal government for the cost of the cleanup.

Cost-Effective Alternative: The cleanup alternative selected for a Superfund site based on technical feasibility, performance, reliability, and cost. The selected alternative does not require EPA to choose the least expensive alternative. It requires that if there are several cleanup alternatives available that deal effectively with the problems at a site, EPA must choose the remedy on the basis of performance, reliability, and cost.

Feasibility Study (FS): See Remedial Investigation/Feasibility Study (RI/FS)

Information Repository: A file containing the current information, technical reports, and response documents regarding a Superfund site. The Information Repository is usually located in a public building that is convenient for local residents, such as a public library.

Operation and Maintenance (O&M): Activities conducted at a site after a response action occurs, to ensure that the cleanup or containment system is functioning properly.

Potentially Responsible Party (PRP): Any individual(s) or company(s) (such as owners, operators, transporters, or generators) potentially responsible for, or contributing to, the contamination problems at a Superfund site. Whenever possible, EPA requires PRP's, through administrative and legal actions, to clean up hazardous waste sites they have contaminated.

Proposed Plan: The documentation of EPA's proposed remedy for a Superfund site based on the RI/FS. The Proposed Plan is put out for public comment and serves as the basis for input from all concerned parties. Comments generated from the Proposed Plan are compiled and considered by EPA and presented in the Record of Decision (ROD).

Public Comment Period: A time period during which the public can review and comment on various documents and EPA actions. For example, a Public Comment Period is provided when EPA proposes to a remedy at a site through a Proposed Plan.

Public Hearing: A public meeting held during the Public Comment Period where public testimony is taken by the EPA from any concerned parties. Comments provided during the Public Hearing are recorded in the record and are responded to by the EPA in the Response to Comments.

Record of Decision (ROD): A public document that explains which cleanup alternative(s) will be used at a Superfund site. The Record of Decision is based on information and technical analysis generated during the Remedial Investigation/Feasibility Study (RI/FS) and consideration of public comments and community concerns.

Remedial Action (RA): The actual construction or implementation phase that follows the Remedial Design of the selected cleanup alternative at a Superfund site.

Remedial Design (RD): An engineering phase that follows the Record of Decision when technical drawings and specifications are developed for the subsequent Remedial Action at a Superfund site.

Remedial Investigation/Feasibility Study (RI/FS): Two distinct but related studies. They are usually performed at the same time, and together referred to as the "RI/FS". They are intended to:

- Gather the data necessary to determine the type and extent of contamination at a Superfund site;
- Established criteria for cleaning up the site;
- Identify and screen cleanup alternatives for Remedial Action;
- Analyze in detail the technology and costs of the alternatives.

Remedial Project Manager (RPM): The EPA official responsible for overseeing the Remedial Response activities at a Superfund site.

Responsiveness Summary: A summary of both oral and written public comments received by EPA during a Public Comment Period on key EPA documents and EPA's response to those comments. The Responsiveness Summary is included in the Record of Decision as the record of community concerns for EPA decision-makers.

Superfund: The common name used for the Comprehensive Environmental Response, Compensation, and Liability Act.

Waste Disposal, Inc. Group (WDIG): The group of corporations identified as Potentially Responsible Parties that are named in EPA's enforcement order to perform investigations and remedial design activities for the WDI site.

Acronyms

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

FS: Feasibility Study

O&M: Operations & Maintenance

PRP: Potentially Responsible Parties

ROD: Record of Decision

RA: Remedial Action

RD: Remedial Design

RI/FS: Remedial Investigation/Feasibility Study

RPM: Remedial Project Manager

WDIG: Waste Disposal, Inc. Group